

Connecticut Coastal Structures Inventory Study

September 1988



**US Army Corps
of Engineers**

New England Division

SECTION 22
CONNECTICUT COASTAL STRUCTURES INVENTORY STUDY

PHASE I - NEW LONDON COUNTY

MAIN REPORT

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASSACHUSETTS

SEPTEMBER 1988

MAIN REPORT
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I. INTRODUCTION

STUDY AUTHORITY

Authority for this study is contained in , "Planning Assistance to States", Section 22 of the Water Resources Development Act of 1974, Public Law 93-251, as amended. This section authorizes cooperation with the states in the preparation of plans for the development, utilization, and conservation of water and related resources.

STUDY PURPOSE AND SCOPE

The Connecticut Department of Environmental Protection requested an inventory of existing erosion and flood control structures on the northern shore of Long Island Sound within the statutory boundaries of the State of Connecticut. This study supports the DEP's continuing effort to inventory all existing shoreline, and near shore structures, along the Connecticut coastline and to identify the location of deteriorated coastal structures. This study is to be conducted in several phases. This report documents the data as gathered during the first phase. The first phase covers New London County.

DESCRIPTION OF THE STUDY AREA

The southern boundary of of the State of Connecticut is the shore of Long Island Sound, a narrow arm of the Atlantic Ocean sheltered by Long Island. The portion of the shore facing open water of Long Island Sound is the main area of interest in this report and is approximately 165 miles long. The shore is irregular and dotted with bays, coves, promontories, and near lying islands. There is intensive development along the waterfront for residential, commercial and recreational purposes. The study area for this report extends from the Pawcatuck River to the Connecticut River and includes the towns of Stonington, Groton, Waterford, East Lyme, and Old Lyme which comprises the Long Island Sound frontage of New London County.

The proposed study area for the next phase of the inventory will cover the shore areas of Middlesex and New Haven Counties.

OTHER STUDIES

Other studies prepared by the Corps of Engineers for the State of Connecticut and related to the issue of coastal erosion and flooding include a series of reports published from 1949 to 1957 entitled "Beach Erosion Control Reports on Cooperative Study of Connecticut". For these efforts, the Connecticut shoreline was divided into 11 areas and 10 beach erosion control reports containing beach erosion control recommendations were prepared.

In 1976 a report was prepared by the Corps entitled "Connecticut Coastline, Effects of Coastal Storms". This report evaluated the effect of wave runup along the shoreline and indicated areas where wave runup studies should be conducted in the future. Issues considered in the report included the existing and potential future land use along the immediate Connecticut coastline, population trends, physical features and characteristics of the shoreline and the forces which directly effect the erosion process.

More recently, in 1980, the Corps compiled a "Project Maps" report on Corps' shore protection, navigation, and flood control projects along the Connecticut coastline. This report contains a project map and information sheet for each Corps' project. The 1980 report is being updated and should be released in the coming year.

In addition under the Section 22 study authority three harbor inventory reports have been prepared; namely New London Harbor, Bridgeport Harbor, and New Haven Harbor.

Shore protection manuals by the Corps Coastal Engineering Research Center were used in preparation of the structure definitions section for this report.

II. METHODOLOGY

FIELD INVESTIGATIONS

A review of existing information on erosion control and flood control projects, USGS topographic quadrangles (1:24000 scale), and aerial photography indicated that there were numerous coastal erosion and flood control structures along the Connecticut shoreline. The use, type, or number of structures could not be determined from the existing mapped information. It was therefor necessary to conduct field investigations. These were done in the summer of 1987.

The field investigations proceeded south from the Pawcatuck River to the Connecticut River. This area represents approximately one third of the Connecticut coastline. Structures inside of major harbors were not inventoried as part of this effort.

The field team identified the location of the structure on the appropriate USGS quadrangle, recorded site information on a field survey sheet, and photographed each site. Information was collected by observation on the type, dimensions, and construction material of the structure. The apparent purpose of the structure and its condition as well as the type of land use at and adjacent to the structure including access and ownership were noted. No engineering measurements were made at the site.

The types of structures identified included seawalls, bulkheads, revetments, groins, riprap shorelines, breakwaters, and jetties. Construction materials included stone, concrete, wood, and steel. Structure dimensions were estimated visually or where possible a tape measure was used. Estimates of height of the structure above or below the mean high water were estimated from the high water mark apparent on the shore, or structure. These dimensions are only intended to aid in describing the structure and should not be considered as engineering estimates.

The condition of the structure was rated as good, fair, or poor based on visual observation of field workers. But this rating is not considered an engineering judgement. The ownership of the site and access to the site was assessed to be either private, or public based on visual observation. Sites considered private included structures in front of homes, commercial establishments, and at town beaches.

A field sheet was used to record this data at each site. It has been refined for future field work and is included as Table 1. The amount and level of detail of the information gathered at each structure was dependent on the physical accessibility of the site.

DATABASE

A database management system was developed using DBASE III to store the collected data. A record of information was entered into the database for each structure. This information was taken from the field survey sheets. An inventory number and the appropriate USGS quadrangle name was used to identify each structure recorded in the database.

The data base management system is accessed through a series of menus that allows addition of records, editing and deletion of records, and searching of records for specified criteria. The full record of information or a line listing of selected information from a record can be output to either the screen or printer. In the future this database should be useful for sorting and selecting coastal structures information.

TABLE 1
CONNECTICUT COASTAL STRUCTURES INVENTORY
FIELD SHEET

INVENTORY NUMBER (7) _____
 QUAD (15) _____
 ADDRESS (25) _____
 TOWN (20) _____ STATE (2) _____
 COUNTY (20) _____

<u>STRUCTURE TYPE</u> (15)	<u>MAIN FUNCTION</u> (60)
___ SEAWALL	SEPARATES LAND AND WATER, PREVENTS EROSION AND FLOODING
___ BULKHEAD	RETAINS LAND, PREVENTS SLIDING OF BANK AND EROSION
___ REVEIMENT	FACING ON SLOPE WHICH PREVENTS EROSION
___ GROIN(S)	TRAPS LITTORAL DRIFT, RETARDS SHORE EROSION
___ RIPRAP	PROTECTIVE LAYER WHICH PREVENTS EROSION OF A SLOPE
___ BREAKWATER	PROTECTS HARBOR/ANCHORAGE BY INTERCEPTING WAVES
___ JETTY	PREVENTS SHOALING OF CHANNEL BY LITTORAL DRIFT
___ OTHER (15)	_____

CONDITION ___ GOOD ___ FAIR ___ POOR

MATERIAL	___ STONE IN CEMENT	___ CONCRETE	___ STEEL
	___ WOOD	___ STONE	___ QUADRIPODS
	___ STONE BLOCKS	___ IRR. STONE FRAG	___ LARGE BOULDERS
	___ STEEL PILE	___ TIMBER PILE	___ CEMENT BLOCKS
	___ OTHER (15)	_____	

GEN. DESC. (3 X 60) L= _____ FT W= _____ FT H= _____ FT ABOVE/BELOW MHW

INSPECTION DATE (6) ____/____/____ INSPECTION TIME (4) _____ (MILITARY)

PERMIT (6) _____

OWNER (25) ___ PRIVATE ___ PUBLIC _____

ACCESS (25) ___ PRIVATE ___ PUBLIC _____

LAND USE (30) ___ RESIDENTIAL ___ RECREATIONAL

 ___ COMMERCIAL ___ INDUSTRIAL

 ___ INSTITUTIONAL

PICTURES (5 X 30)

ROLL _____ NEG _____

ROLL _____ NEG _____

COMMENTS, SHORE COMPOSITION, MISC. NOTES (3 X 60)

MAPPING

The locations of the structures were mapped on 7.5 minute USGS topographic quadrangles enlarged to a scale of 1 inch equals 1000 feet. These locations are shown in Plate 1 - Plate 5. The quadrangles used and towns covered are listed below.

- o Plate 1 represents the Watch Hill Quadrangle and covers a portion of the town of Stonington.
- o Plate 2 represents the Mystic Quadrangle and covers a large portion of Stonington and a small portion of Groton.
- o Plate 3 represents the New London Quadrangle and covers a large portion of Groton and a small portion of Waterford.
- o Plate 4 represents the Niantic Quadrangle and covers portions of Waterford and East Lyme.
- o Plate 5 represents the the Old Lyme Quadrangle and covers the town of Old Lyme. The Old Lyme Quadrangle also covers the town of Old Saybrook which is in Middlesex County and will be included in phase II of this study.

The structure inventory numbers indicated on the plates correspond to the inventory numbers in the database.

III. RESULTS

SUMMARY

The phase I inventory covers the coastal shoreline of New London County, Connecticut. The results of this inventory consists of maps showing the locations of the structures, a record of information on each structure entered into the data base management system, and photographs of each structure. Data were gathered on 358 structures during the first phase of this inventory. A summary listing of the structures organized by town are presented in Table 2 - Table 6. The record of information on each structure and the photographs for each structure are organized by quadrangle, and inventory number and included in Appendix A through Appendix E.

TABLE 2
TOWN OF STONINGTON
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
SEAWALL	EAST GRAND STREET	MYSTIC	1.10
GROIN&PIER	EDWARDS POINT	MYSTIC	1.20
SEAWALL	STONINGTON VILLAGE	MYSTIC	1.30
GROIN	WALL ST	MYSTIC	1.40
SEAWALLS&PIERS	STONINGTON VILLAGE	MYSTIC	1.50
BREAKWATER	STONINGTON VILLAGE	MYSTIC	2.00
BREAKWATER	STONINGTON VILLAGE	MYSTIC	3.00
GROIN	STONINGTON VILLAGE	MYSTIC	4.00
BULKHEAD	STONINGTON VILLAGE	MYSTIC	5.00
GROIN	STONINGTON VILLAGE	MYSTIC	6.00
SEAWALL	WATER STREET, STON. VILL.	MYSTIC	7.00
JETTY & LIGHT	WATER ST., STON. VILL.	MYSTIC	8.00
SEAWALL	STONINGTON VILLAGE	MYSTIC	9.00
BULKHEAD	WATER ST, STON. VILL.	MYSTIC	10.00
SEAWALLS	WATER ST, STON. VILL.	MYSTIC	11.00
SEAWALLS	WATER ST, STON. VILL.	MYSTIC	11.10
REVTMENT	STONINGTON VILLAGE	MYSTIC	12.00
WAVE ATTENUATOR	NORTH WEST ST, STON.VILL.	MYSTIC	13.00
BULKHEAD	NORTH WEST ST, STON.VILL.	MYSTIC	14.00
BULKHEAD	STONINGTON VILLAGE	MYSTIC	15.00
REVTMENT	ELM ST, STON. VILL.	MYSTIC	16.00
SEAWALLS	FRONT ST, STON. VILL.	MYSTIC	17.00
BULKHEAD	STONINGTON VILLAGE	MYSTIC	18.00
SEAWALL	194 WATER ST, STON. VILL.	MYSTIC	19.00
SEAWALL	MATHEWS ST., STON.VILLAGE	MYSTIC	20.00
RR REVTMENT		MYSTIC	21.00
GROIN	WAMPHASSUC PT RD	MYSTIC	22.00
GROIN	WAMPHASSUC PT RD	MYSTIC	23.00
RIP RAP SH LINE	WAMPHASSUC PT RD	MYSTIC	24.00
GROIN FIELD	WAMPHASSUC PT RD	MYSTIC	25.00
BULKHEAD	WAMPHASSUC PT RD	MYSTIC	26.00
3 GROINS	WAMPHASSUC PT RD	MYSTIC	27.00
SEAWALL	SKIPPER AVE	MYSTIC	28.10
REVTMENT	BEACH AVENUE	MYSTIC	28.20
SEAWALL	NOTES AVE	MYSTIC	29.00
SEAWALLS (5)		MYSTIC	30.00
SEAWALL		MYSTIC	31.00
SEAWALL		MYSTIC	32.00
SEAWALLS-SERIES		MYSTIC	33.00
SEAWALL	JAMES ST	MYSTIC	34.00
SEAWALLS-SERIES	LINDBERG AVE	MYSTIC	35.00
REVTMENT	QUIANBOG COVE	MYSTIC	36.00
WALL/GROIN/DOCK		MYSTIC	37.00
SEAWALL	8 E. SHORE RD	MYSTIC	38.00
SEAWALL		MYSTIC	39.00
SEAWALL		MYSTIC	40.00

TABLE 2
TOWN OF STONINGTON
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
2 GROINS		MYSTIC	41.10
SEAWALL		MYSTIC	41.20
SEAWALL/PIER		MYSTIC	42.00
RIPRAP	COVE RD	MYSTIC	43.00
SEAWALL	MASONS ISLAND RD	MYSTIC	44.00
GROINS (2)		MYSTIC	45.00
GROINS (SERIES)		MYSTIC	46.00
REVETMENT		MYSTIC	47.00
SEAWALL		MYSTIC	48.00
BULKHEAD		MYSTIC	49.00
REVETMENT		MYSTIC	50.00
GROIN		MYSTIC	51.00
SEAWALL		MYSTIC	52.00
RIP RAP SHRLINE		MYSTIC	53.00
GROINS (2)/DOCK		MYSTIC	54.00
SEAWALL/RPRP/GR		MYSTIC	55.00
GROIN		MYSTIC	56.00
SEAWALL		MYSTIC	57.00
SEAWALL		MYSTIC	58.00
SEAWALL		MYSTIC	59.00
STONE REVETMENT		MYSTIC	60.00
SEAWALL		MYSTIC	61.00
RIPRAP	ENDERS IS	MYSTIC	62.00
PIER	ENDERS ISLAND	MYSTIC	63.00
SEAWALL	ENDERS ISLAND	MYSTIC	64.00
BULKHEAD	MASON ISLAND	MYSTIC	65.00
BULKHEAD	MASON ISLAND	MYSTIC	66.00
REVETMENT	MASON ISLAND	MYSTIC	67.00
WALL/REVETMENT	MASON ISLAND	MYSTIC	68.00
REVETMENT	MASON ISLAND	MYSTIC	69.00
BULKHEAD	MASON ISLAND	MYSTIC	70.00
SEAWALL	MASON ISLAND	MYSTIC	71.00
CAUSEWAY TO IS.	MASON ISLAND RD	MYSTIC	72.00
BULKHEAD	MURPHY POINT	MYSTIC	73.00
SEAWALL	MURPHY POINT	MYSTIC	74.00
SEAWALL	MURPHY POINT	MYSTIC	75.00
SEAWALL	MURPHY POINT	MYSTIC	76.00
SEAWALL	MURPHY POINT	MYSTIC	77.00
BULKHEAD	MURPHY POINT	MYSTIC	78.00
BULKHEAD	MURPHY POINT	MYSTIC	79.00
BULKHEAD		WATCH HILL	1.00
GROIN & RIPRAP		WATCH HILL	2.00
GROIN		WATCH HILL	3.00
GROIN		WATCH HILL	4.00
GROIN		WATCH HILL	5.00

TABLE 3
TOWN OF GROTON
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
REVETMENT	CARSON ROAD, MYSTIC HARBOR	MYSTIC	80.00
REVETMENT	CARSON ROAD, MYSTIC HARBOR	MYSTIC	81.00
BULKHEAD	CARSON ROAD, MYSTIC HARBOR	MYSTIC	82.00
BULKHEAD	MYSTIC HARBOR	MYSTIC	83.00
BULKHEAD	WILLOW POINT	MYSTIC	84.00
REVETMENT&WALL	WILLOW POINT	MYSTIC	85.00
SEAWALL	WILLOW POINT	MYSTIC	86.00
SEAWALL	ESSEX ST., SPENCE POINT	MYSTIC	87.00
SEAWALL	ESSEX ST., SPENCE POINT	MYSTIC	88.00
SEAWALL	ESSEX ST., SPENCE POINT	MYSTIC	89.00
RIPRAP	COVE LANE, SPENCE POINT	MYSTIC	90.00
RIPRAP	NOANK	MYSTIC	91.00
RIPRAP	NOANK	MYSTIC	92.00
SEAWALL&DOCK	NOANK	MYSTIC	93.00
SEAWALL	NOANK	MYSTIC	94.00
REVETMENT	NOANK	MYSTIC	95.00
BULKHEAD	NOANK	MYSTIC	96.00
SEAWALL	NOANK	MYSTIC	97.00
REVETMENT	NOANK	MYSTIC	98.00
REVETMENT	NOANK	MYSTIC	99.00
REVETMENT	NOANK	MYSTIC	100.00
SEAWALL	8 FRONT ST., NOANK	MYSTIC	101.00
SEAWALL	NOANK	MYSTIC	102.00
RIPRAP	NOANK	MYSTIC	103.00
BULKHEAD	NOANK	MYSTIC	104.00
SEAWALL	NOANK	MYSTIC	105.00
RIPRAP	NOANK	MYSTIC	106.00
RIPRAP	NOANK	MYSTIC	107.00
GROIN	NOANK	MYSTIC	108.00
RIPRAP	NOANK	MYSTIC	109.00
BULKHEAD	PEARL ST., NOANK	MYSTIC	110.00
SEAWALL	PEARL ST., NOANK	MYSTIC	111.00
SEAWALL	PEARL ST., MORGAN POINT	MYSTIC	112.00
SEAWALL	PEARL ST., NOANK, MORGAN PT	MYSTIC	113.00
SEAWALL	PEARL ST., NOANK, MORGAN PT	MYSTIC	114.00
PIER	PEARL ST., NOANK, MORGAN PT	MYSTIC	115.00
REVETMENT	PEARL ST., NOANK, WEST COVE	MYSTIC	116.00
REVETMENT	PEARL ST., NOANK, WEST COVE	MYSTIC	117.00
REVETMENT	PEARL ST., NOANK, WEST COVE	MYSTIC	118.00
SEAWALL	37-41 SPRING ST., NOANK	MYSTIC	119.00
SEAWALL & DOCK	WEST COVE	MYSTIC	120.00
SEAWALL	WEST COVE	MYSTIC	121.00
SEAWALL	WEST COVE	MYSTIC	122.00
SEAWALLS	WEST COVE	MYSTIC	123.00
BREAKWATER	MARSH ROAD, WEST COVE	MYSTIC	124.00
SEAWALL	WEST COVE	MYSTIC	125.00

TABLE 3
TOWN OF GROTON
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
SEAWALL	EKSER COVE, NOANK	MYSTIC	126.00
SEAWALL	ESKER COVE, NOANK	MYSTIC	127.00
SEAWALL	NOANK, ESKER COVE	MYSTIC	128.00
SEAWALLS&DOCKS	NOANK, ESKER COVE	MYSTIC	129.00
SEAWALL	NOANK, ESKER COVE	MYSTIC	130.00
SEAWALL	NOANK, ESKER COVE	MYSTIC	131.00
SEAWALL	NOANK, ESKER COVE	MYSTIC	132.00
RIPRAP	ESKER POINT	MYSTIC	133.00
RIPRAP & DOCK	ESKER POINT	MYSTIC	134.00
BRIDGE/REVTMEN	LONG POINT	NEW LONDON	1.00
SMALL GROIN	LONG POINT	NEW LONDON	2.00
4 GROIN SYSTEM	LONG POINT	NEW LONDON	3.00
SEAWALL	LONG POINT	NEW LONDON	4.00
2 GROINS	LONG POINT	NEW LONDON	4.10
SEAWALL	LONG POINT	NEW LONDON	5.00
2 GROINS	LONG POINT	NEW LONDON	5.10
GROIN	LONG POINT	NEW LONDON	6.00
SEAWALL	LONG POINT	NEW LONDON	7.00
RIPRAP	LONG POINT	NEW LONDON	8.00
BULKHEAD & DOCK	LONG POINT	NEW LONDON	9.00
SEAWALL	LONG POINT	NEW LONDON	10.00
SEAWALL	LONG POINT	NEW LONDON	11.00
SEAWALL	LONG POINT	NEW LONDON	12.00
SEAWALL	LONG POINT	NEW LONDON	13.00
SEAWALL	LONG POINT	NEW LONDON	14.00
GROIN	384 W.SHORE AVE., LONG PT	NEW LONDON	15.00
GROIN	384 W.SHORE AVE., LONG PT	NEW LONDON	16.00
SEAWALL	384 W.SHORE AVE., LONG PT	NEW LONDON	17.00
MOORING	384 W.SHORE AVE., LONG PT	NEW LONDON	18.00
SEAWALL	LONG POINT	NEW LONDON	19.00
GROIN	LONG POINT	NEW LONDON	20.00
GROIN	END OF W.SHORE AV, LONG PT	NEW LONDON	21.00
SEAWALL & GROIN	380 W. SHORE AVE, LONG PT	NEW LONDON	21.10
SEAWALL	374 W.SHORE AVE., LONG PT	NEW LONDON	22.00
SEAWALL	372 W,SHORE AVE., LONG PT	NEW LONDON	23.00
JETTY	370 W.SHORE AVE., LONG PT	NEW LONDON	24.00
JETTY	END ATLANTIC AVE, LONG PT	NEW LONDON	25.00
RIPRAP	ISLAND CR, W HALF, LONG PT	NEW LONDON	26.00
REVTMENT	ANCHORAGE CR, SOUTH END	NEW LONDON	27.00
RIPRAP	JUPITER POINT ROAD	NEW LONDON	28.00
SEAWALL	175 JUPITER POINT ROAD	NEW LONDON	28.10
SEAWALL	169 JUPITER POINT ROAD	NEW LONDON	29.00
SEAWALL	157 JUPITER POINT ROAD	NEW LONDON	30.00
SEAWALL	133 JUPITER POINT ROAD	NEW LONDON	31.00
SEAWALL/DECKING	99 PINE ISLAND ROAD	NEW LONDON	32.00
SEAWALL	95 POINE ISLAND ROAD	NEW LONDON	33.00

TABLE 3
TOWN OF GROTON
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
SEAWALL W/ DOCK	91 JUPITER POINT ROAD	NEW LONDON	34.00
SEAWALL	77-83 PINE ISLAND ROAD	NEW LONDON	35.00
SEAWALL	65 PINE ISLAND ROAD	NEW LONDON	36.00
BULKHEAD	END OF BAYBERRY LANE	NEW LONDON	37.00
REVETMENT	916 SHENNECOSSETT ROAD	NEW LONDON	38.00
REVETMENT	SHENNECOSSETT ROAD	NEW LONDON	39.00
SEAWALL	WEST RD	NEW LONDON	40.00
REVETMENT	WEST RD., AVERY PT.	NEW LONDON	41.00
REVETMENT	AVERY PT. (WEST SIDE)	NEW LONDON	42.00
SEAWALL	AVERY PT. (WEST SIDE)	NEW LONDON	43.00
GROIN	EASTERN PT RD	NEW LONDON	44.00
SEAWALL	EASTERN POINT RD	NEW LONDON	44.10
REVETMENT	BEACH POND ROAD	NEW LONDON	45.00
SEAWALL	BEACH POND ROAD	NEW LONDON	46.00
GROIN	BEACH POND ROAD	NEW LONDON	47.00
GROIN	BEACH POND ROAD	NEW LONDON	48.00
SEAWALL	BEACH POND ROAD	NEW LONDON	49.00
GROIN	BEACH POND ROAD	NEW LONDON	50.00

TABLE 4
TOWN OF WATERFORD
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
BULKHEAD	STRAND ROAD	NIANTIC	1.00
REVETMENT	SEA MEADOW LANE	NIANTIC	2.00
BULKHEAD	END OF SEA MEADOW LANE	NIANTIC	3.00
SEAWALL	OFF OF SHORE ROAD	NIANTIC	4.00
GROIN	OFF OF SHORE ROAD	NIANTIC	5.00
GROIN	OFF OF SHORE ROAD	NIANTIC	6.00
GROIN	OFF OF SHORE ROAD	NIANTIC	7.00
GROIN	OFF OF SHORE DRIVE	NIANTIC	8.00
GROIN	OFF OF SHORE DRIVE	NIANTIC	9.00
GROIN	SOUTH END, MAGONK PT. RD.	NIANTIC	10.00
GROIN	S. END, MAGONK PT. ROAD	NIANTIC	11.00
SEAWALL	SOUTH END, MAGONK PT. RD.	NIANTIC	12.00
GROIN	SOUTH OF SHORE ROAD	NIANTIC	13.00
3 BREAKWATERS	SOUTH OF NEW SHORE ROAD	NIANTIC	14.00
RIPRAP	30 NEW SHORE ROAD	NIANTIC	15.00
SEAWALL	32 NEW SHORE ROAD	NIANTIC	16.00
SEAWALL	34 NEW SHORE ROAD	NIANTIC	17.00
SEAWALL	36-40 NEW SHORE ROAD	NIANTIC	18.00
BULKHEAD	36-40 NEW SHORE ROAD	NIANTIC	19.00
BULKHEAD	42 NEW SHORE ROAD	NIANTIC	20.00
RIPRAP	END OF DOCK ROAD	NIANTIC	21.00
BREAKWATER	END OF DOCK RD., GOSHEN	NIANTIC	22.00
REVETMENT	SOUTH END OF DOCK ROAD	NIANTIC	23.00
GROIN	13 BEACH ST., GOSHEN	NIANTIC	24.00
BULKHEAD/RIPRAP	11-13 BEACH ST., GOSHEN	NIANTIC	25.00
BULKHEAD	10 BEACH ST., GOSHEN	NIANTIC	26.00
BULKHEAD	1-2 BEACH ST., GOSHEN	NIANTIC	27.00
BULKHEAD	BEACH ST & PLMER RD.	NIANTIC	28.00
BULKHEAD/RIPRAP	6 REED AVE., GOSHEN	NIANTIC	29.00
BULKHEAD/RIPRAP	END OF REED AVE., GOSHEN	NIANTIC	30.00
RIPRAP	36 WINDWARD WAY	NIANTIC	31.00
SEAWALL&RIPRAP	36 WINDWARD WAY	NIANTIC	32.00
GROIN	38 WINDWARD WAY	NIANTIC	33.00
SEAWALL/RIPRAP	38 WINDWARD WAY	NIANTIC	34.00
SEAWALL	40-60 WINDWARD WAY	NIANTIC	35.00
GROIN	48 WINDWARD WAY	NIANTIC	36.00
GROIN	60 WINDWARD WAY	NIANTIC	37.00
REVETMENT	POWER PLANT PERIMETER RD.	NIANTIC	38.00

TABLE 5
TOWN OF EAST LYME
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
REKETMENT	ROUTE 156	NIANTIC	39.00
R.R. REKETMENT	ROUTE 156	NIANTIC	39.10
GROIN	BAPTIST LANE	NIANTIC	40.00
REKETMENT	BAPTIST LANE	NIANTIC	41.00
SEAWALL	12-28 ATLANTIC AVE.	NIANTIC	42.00
GROIN	28 ATLANTIC AVE.	NIANTIC	43.00
GROIN	SHORE ROAD	NIANTIC	44.00
REKETMENT	SHORE ROAD	NIANTIC	45.00
BULKHEAD	SHORE ROAD	NIANTIC	46.00
BREAKWATER	SHORE ROAD	NIANTIC	47.00
SEAWALL	24 SHORE ROAD	NIANTIC	48.00
SEAWALL	28-54 SHORE ROAD	NIANTIC	49.00
BULKHEAD	58 SHORE ROAD	NIANTIC	50.00
RIPRAP	SOUTH END OF SHORE ROAD	NIANTIC	51.00
REKETMENT	19 ATTAWAN AVE.	NIANTIC	52.00
GROIN	ATTAWAN AVE & GOODWIN ST.	NIANTIC	53.00
GROIN	ATTAWAN AVE & GOODWIN ST.	NIANTIC	54.00
GROIN/JETTY	ATTAWAN AVE & ROCKWELL ST	NIANTIC	55.00
SEAWALL	ATTAWAN AVE & ROCKWELL ST	NIANTIC	56.00
REKETMENT	ATTAWAN AVE & BRONSON ST	NIANTIC	57.00
GROIN	ACROSS ST FROM 55 ATTAWAN	NIANTIC	58.00
REKETMENT	ACROSS FROM 57 ATTAWAN AV	NIANTIC	59.00
SEAWALL/RIPRAP	15 BIDWELL ST.	NIANTIC	60.00
5 GROINS	2-8 EAST SHORE DRIVE	NIANTIC	61.00
SEAWALL	1 EAST SHORE DRIVE	NIANTIC	62.00
SEAWALL	2-8 EAST SHORE DRIVE	NIANTIC	63.00
SEAWALL/RIPRAP	10 EAST SHORE DRIVE	NIANTIC	64.00
GROIN	12 EAST SHORE DRIVE	NIANTIC	65.00
SEAWALL	2 INDIANOLA ROAD	NIANTIC	66.00
GROIN	2 INDIANOLA ROAD	NIANTIC	67.00
GROIN	1-2 WHITE CAP ROAD	NIANTIC	68.00
SEAWALL	2 WHITE CAP ROAD	NIANTIC	69.00
SEAWALL	40 EAST SHORE DRIVE	NIANTIC	70.00
GROIN	2 SEA BREEZE AVE.	NIANTIC	71.00
SEAWALL	2 SEA BREEZE-48 E. SHORE	NIANTIC	72.00
GROIN	54 EAST SHORE DRIVE	NIANTIC	73.00
SEAWALL	50-52 EAST SHORE DRIVE	NIANTIC	74.00
SEAWALL	54 EAST SHORE DRIVE	NIANTIC	75.00
REKETMENT	58 EAST SHORE DRIVE	NIANTIC	76.00
SEAWALL	60 EAST SHORE DRIVE	NIANTIC	77.00
SEAWALL	62 EAST SHORE DRIVE	NIANTIC	78.00
SEAWALL	62-64 EAST SHORE DRIVE	NIANTIC	79.00
GROIN	62 EAST SHORE DRIVE	NIANTIC	80.00
3 GROINS	BETWEEN 66&68 E. SHORE DR	NIANTIC	81.00
SEAWALL	66-68 EAST SHORE DRIVE	NIANTIC	82.00
SEAWALL	70-74 EAST SHORE DRIVE	NIANTIC	83.00

TABLE 5
TOWN OF EAST LYME
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
REVETMENT	74-76 EAST SHORE DRIVE	NIANTIC	84.00
SEAWALL	76-82 EAST SHORE DRIVE	NIANTIC	85.00
GROIN	82 EAST SHORE	NIANTIC	86.00
SEAWALL	2 BRIGHT WTR. RD-1 OSPREY	NIANTIC	87.00
GROIN	2 BRIGHT WTR. RD-1 OSPREY	NIANTIC	88.00
GROIN	BETWEEN 1 & 2 OSPREY ROAD	NIANTIC	89.00
SEAWALL	6 WATERSIDE AVE.	NIANTIC	90.00
SEAWALL W/APRON	1 BLUE HERON-103 E. SHORE	NIANTIC	91.00
GROIN	4 BLUE HERON COURT	NIANTIC	92.00
SEAWALL	108 EAST SHORE ROAD	NIANTIC	93.00
SEAWALL	112 E. SHORE TO 2 BOND ST	NIANTIC	94.00
GROIN	112 EAST SHORE DRIVE.	NIANTIC	95.00
GROIN	4 BOND ST.	NIANTIC	96.00
GROIN	17 WEST LANE	NIANTIC	97.00
GROIN	17 WEST LANE	NIANTIC	98.00
BULKHEAD W/ TOE	41 WEST LANE	NIANTIC	99.00
SEAWALL	269-287 OLD BLACK PT. RD.	NIANTIC	100.00
SEAWALL	267 OLD BLACK POINT ROAD	NIANTIC	101.00
SEAWALL	261-265 OLD BLACK PT. RD.	NIANTIC	102.00
SEAWALL/RIPRAP	249-259 OLD BLACK PT. RD.	NIANTIC	103.00
RIPRAP	223 OLD BLACK POINT ROAD	NIANTIC	104.00
REVETMENT	219 OLD BLACK POINT ROAD	NIANTIC	105.00
REVETMENT	5 RIDGEWOOD ROAD	NIANTIC	106.00
SEAWALL	311 GIANTS NECK ROAD	NIANTIC	107.00
GROIN	311 GIANTS NECK ROAD	NIANTIC	108.00
SEAWALL	291-311 GIANTS NECK ROAD	NIANTIC	109.00
SEAWALL	289 GIANTS NECK ROAD	NIANTIC	110.00
SEAWALL	CAUSEWAY AT GIANTS NCK RD	NIANTIC	111.00
SEAWALL	8 POINT ROAD	NIANTIC	112.00
BREAKWATER	15 POINT ROAD	NIANTIC	113.00
SEAWALL	15 POINT ROAD	NIANTIC	114.00
GROINS (3)	251 GIANTS NECK ROAD	NIANTIC	115.00
SEAWALL	243 GIANTS NECK ROAD	NIANTIC	116.00
REVETMENT	238 GIANTS NECK ROAD	NIANTIC	117.00
GROIN	230 GIANT NECK ROAD	NIANTIC	118.00
SEAWALL	225-217 GIANT NECK ROAD	NIANTIC	119.00
GROIN	214 GIANTS NECK ROAD	NIANTIC	120.00
RIPRAP	STATE PARK OFF ROUTE 156	NIANTIC	121.00
BREAKWATER	STATE PARK OFF ROUTE 156	NIANTIC	122.00

TABLE 6
TOWN OF OLD LYME
LIST OF STRUCTURES

STRUCTURE	ADDRESS	QUADRANGLE	INVENTORY NUMBER
BULKHEAD	SEA VIEW ROAD	OLD LYME	1.00
REVETMENT	CHAMPION ROAD	OLD LYME	2.00
BREAKWATER		OLD LYME	3.00
GROIN	PRIVATE DRIVE FROM RT 156	OLD LYME	4.00
REVETMENT	PRIVATE DRIVE FROM RT 156	OLD LYME	5.00
BULKHEAD	EDGE LEA BEACH	OLD LYME	6.00
REVETMENT	END OF EDGE LEA ROAD	OLD LYME	7.00
BULKHEAD	68 BILLOW ROAD	OLD LYME	8.00
SEAWALL	15 SEA LN-77 SEA SPRAY RD	OLD LYME	9.00
GROIN	3 SEA LANE	OLD LYME	10.00
GROIN	77 SEA SPRAY LANE	OLD LYME	11.00
JETTY	END OF COLUMBUS AVE	OLD LYME	12.00
GROIN	94 HAWK'S NEST ROAD	OLD LYME	13.00
GROIN	END OF S STREET	OLD LYME	14.00
GROIN	14 WEST END DRIVE	OLD LYME	15.00
GROIN	22 WEST END DRIVE	OLD LYME	16.00
GROIN	30 WEST END DRIVE	OLD LYME	17.00
GROIN	37 WEST END DRIVE	OLD LYME	18.00
GROIN	50 WEST END DRIVE	OLD LYME	19.00
GROIN	64 WEST END DRIVE	OLD LYME	20.00
GROIN	72 WEST END DRIVE	OLD LYME	21.00
GROIN	82 WEST END DRIVE	OLD LYME	22.00
GROIN	94 WEST END DRIVE	OLD LYME	23.00
SEAWALL	96 WEST END DRIVE	OLD LYME	24.00
GROIN	104 WEST END DRIVE	OLD LYME	25.00
GROIN	106 WEST END DRIVE	OLD LYME	26.00
RIPRAP	END OF BRIGHTON ROAD	OLD LYME	27.00
REVETMENT	73-75 BRIGHTON ROAD	OLD LYME	28.00
GROIN	75 BRIGHTON ROAD	OLD LYME	29.00
GROIN	29 SEA SIDE LANE	OLD LYME	30.00
GROIN	ACROSS FROM 6 SEA SIDE LN	OLD LYME	31.00
GROIN	1 SEA SIDE LANE	OLD LYME	32.00
GROIN	GRISWALD POINT	OLD LYME	33.00
REVETMENT	DRIVE OFF OLD SHORE ROAD	OLD LYME	34.00

STRUCTURE DEFINITIONS

GROIN. A finger-like structure built perpendicular to the shoreline, and usually with other groins to trap littoral drift or retard erosion of the shore.

SEAWALL. A structure separating land and water areas, primarily designed to prevent erosion and other damage due to wave action. Also may retain soil behind wall to assist in resisting wave forces. The land behind the seawall is usually a fill area.

BULKHEAD. A structure placed on a bank or bluff to retain or prevent sliding of the land and protect the inland area against damage from wave action. Bulkheads are primarily soil retaining structures which are designed to also resist wave attack.

REVEIEMENT. A stone or concrete armor facing placed on a bank or bluff, dune or embankment, of stone to protect a slope, embankment, or shore structure against erosion by wave action or currents.

RIPRAP SHORELINE. A layer or protective mound of rubble or stones placed to prevent erosion, scour, or sloughing of a structure or embankment.

BREAKWATER. A structure that protects a shore area, harbor, anchorage, or basin by intercepting waves. Breakwaters are wave energy barriers designed to protect any landforms or water area behind them from the direct assault of waves. A breakwater may be either shore connected or offshore. An offshore breakwater parallels the shore and is located in a water depth between 5 and 25 feet.

JETTY. A structure extending into the water to direct and confine river or tidal flow into a channel and prevent or reduce the shoaling of the channel by littoral material. Jetties located at the entrance to a bay or river also serve to protect the entrance channel from wave action and crosscurrents. Jetties also stabilize the inlet location when located at inlets through barrier beaches.

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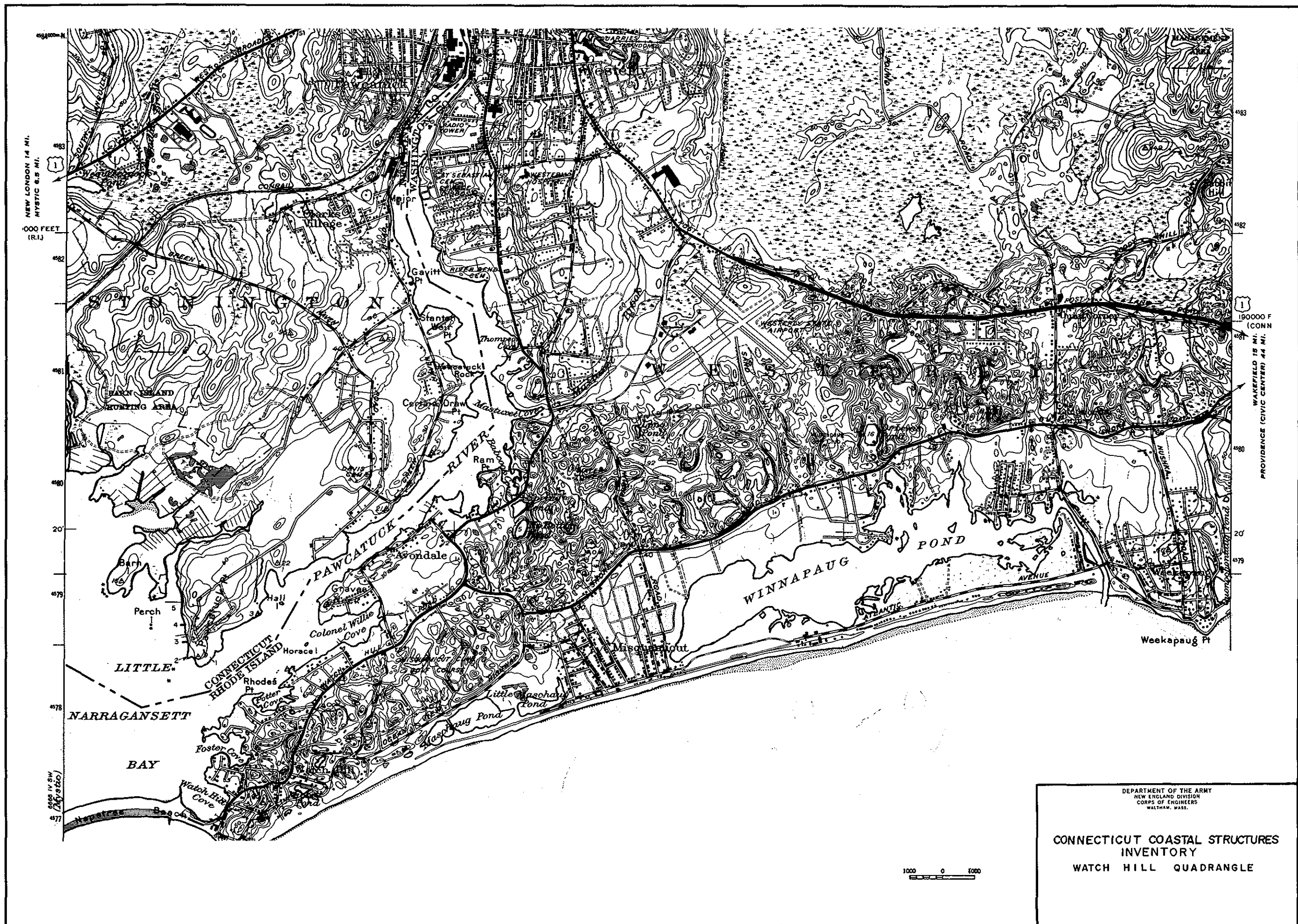
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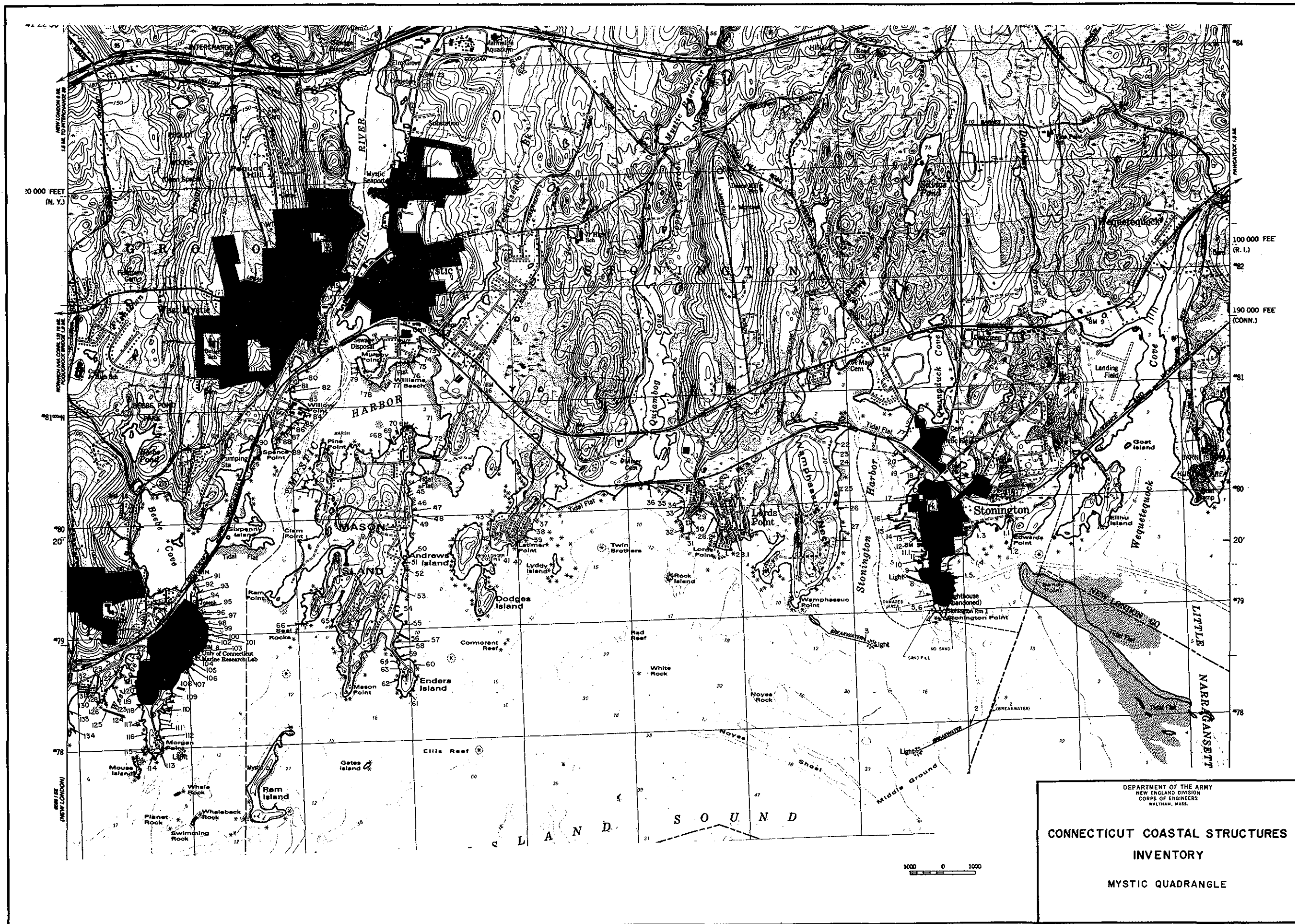
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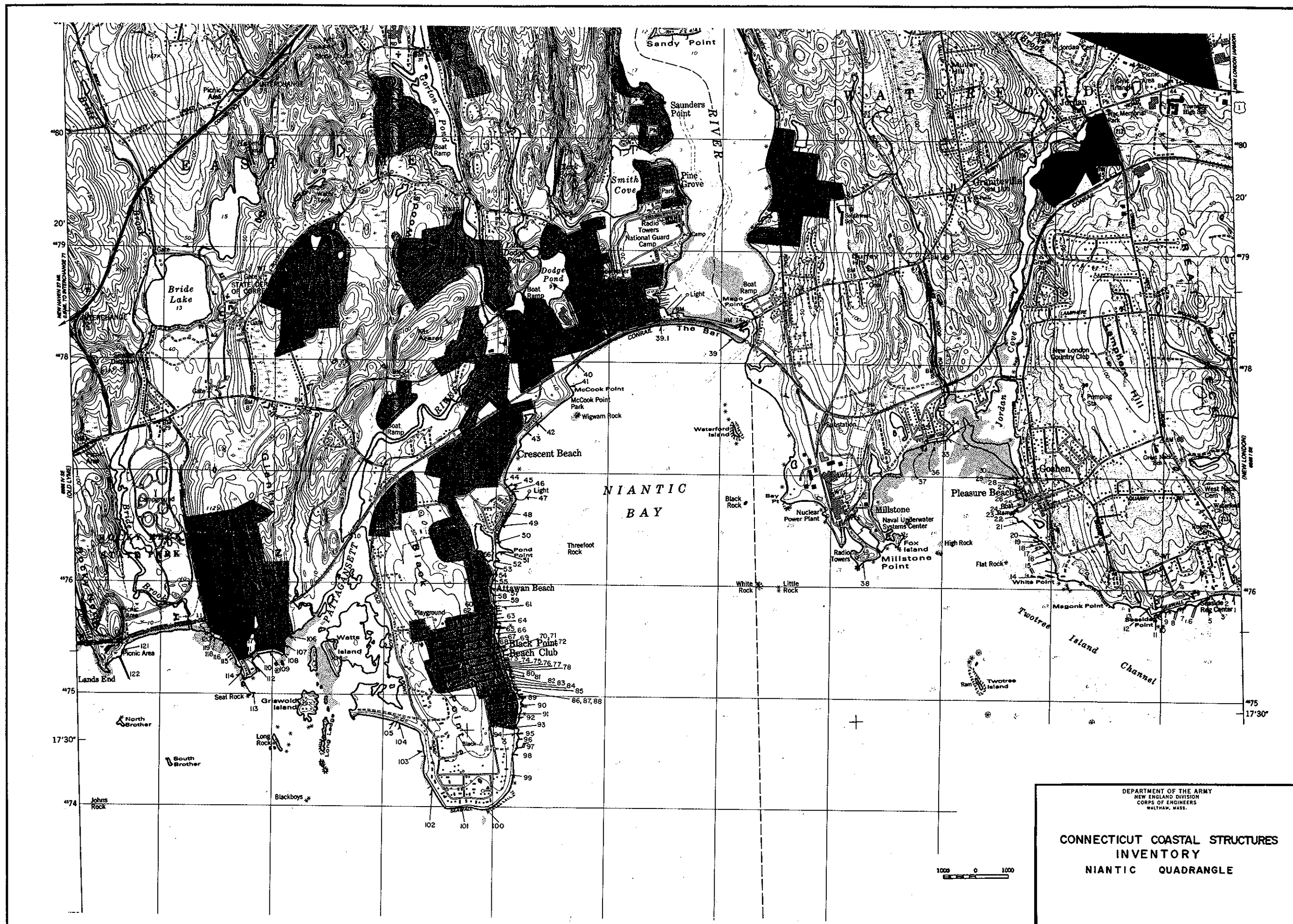
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DEPARTMENT OF THE ARMY
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 WASHINGTON, D.C.

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 INVENTORY**

OLD LYME QUADRANGLE